

WHAT IS CLAIMED IS:

1. A slider assembly providing a connection between a vehicle body and a vehicle suspension, the slider assembly comprising:

a frame;

a locking mechanism attached to the frame, the locking mechanism comprising:

a locking pin movable in and out of engagement with the vehicle body;

a first spring adjacent the locking pin;

a pivot arm movable between a locked position and an unlocked position;

a second spring between the pivot arm and the locking pin;

when the pivot arm is in the locked position, the second spring does not exert a bias on the locking pin and the first spring exerts a bias on the locking pin so as to bias the locking pin into engagement with the vehicle body so as to secure together the vehicle body and the vehicle suspension; and,

when the pivot arm is in the unlocked position, the second spring exerts a bias on the locking pin that overcomes the bias of the first spring thereby biasing the locking pin out of engagement with the vehicle body so that the vehicle body is slidable with respect to the vehicle suspension.

2. The slider assembly of claim 1 wherein the first spring is an extension spring and the second spring is a compression spring, and the bias of the compressed compression spring on the locking pin is greater than the bias of the extension spring on the locking pin.

3. The slider assembly of claim 1 further including a crank arm being operatively connected to the pivot arm, and the crank arm being movable between a locked position in which the pivot arm is in the locked position and an unlocked position in which the pivot arm is in the unlocked position.

4. The slider assembly of claim 3 further including a central shaft connected to the pivot arm, and the crank arm being connected to the central shaft whereby the shaft and the pivot arm rotate upon movement of the crank arm.

5. The slider assembly of claim 4 further including a pull rod connected to the crank arm, the pull rod being longitudinally movable between a locked position and an unlocked position.

6. The slider assembly of claim 5 wherein the pull rod includes a pair of notches that selectively engage the frame so as to prevent the longitudinal movement of the pull rod, one of the notches corresponding to the locked position and the other of the notches corresponding to the unlocked position.

7. The slider assembly of claim 1 wherein the second spring is movable between a relaxed position when the pivot arm is in the locked position and a compressed position when the pivot arm is in the unlocked position.

8. The slider assembly of claim 1 wherein the first spring exerts a direct bias on the locking pin.

9. The slider assembly of claim 1 wherein the second spring exerts a direct bias on the locking pin.

10. The slider assembly of claim 1 wherein the first spring and the second spring each exert a direct bias on the locking pin.

11. A slider assembly providing a connection between a vehicle body and a vehicle suspension, the slider assembly comprising:

a frame;

a locking mechanism attached to the frame, the locking mechanism comprising:

a first locking pin connected to a first extension spring;

a first pivot arm movable between a locked position and an unlocked position;

a first compression spring connecting the pivot arm and the first locking pin;

a second locking pin connected to a second extension spring;

a second compression spring connecting the first pivot arm and the second locking pin;

when the first pivot arm is in the locked position, the first compression spring does not exert a bias on the first locking pin and the first extension spring exerts a bias on the first locking pin so as to bias the first locking pin into engagement with the vehicle body so as to secure together the vehicle body and the vehicle suspension, and the second compression spring does not exert a bias on the second locking pin and the second extension spring exerts a bias on the second locking pin so as to bias the second locking pin into engagement with the vehicle body so as to secure together the vehicle body and the vehicle suspension; and,

when the pivot arm is in the unlocked position, the first compression spring exerts a bias on the first locking pin that overcomes the bias of the first extension spring on the first locking pin thereby biasing the first locking pin out of engagement with the vehicle body so that the vehicle body is slidable with respect to the vehicle suspension, and the second compression spring exerts a bias on the second locking pin that overcomes the bias of the second extension spring on the second locking pin thereby biasing the second locking pin out of engagement with the vehicle body so that the vehicle body is slidable with respect to the vehicle suspension.

12. The slider assembly of claim 11 wherein the locking mechanism further includes:

a second pivot arm, and a shaft connecting the first pivot arm and the second pivot arm, and the second pivot arm being movable between a locked position and an unlocked position;

a third locking pin connected to a third extension spring;

a third compression spring connecting the second pivot arm and the third locking pin;

a fourth locking pin connected to a fourth extension spring;

a fourth compression spring connecting the second pivot arm and the fourth locking pin;

when the second pivot arm is in the locked position, the third compression spring does not exert a bias on the third locking pin and the third extension spring exerts a bias on the third locking pin so as to bias the third locking pin into engagement with the vehicle body so as to secure together the vehicle body and the vehicle suspension, and the fourth compression spring does not exert a bias on the fourth locking pin and the fourth extension spring exerts a bias on the fourth locking pin so as to bias the fourth locking pin into engagement with the vehicle body so as to secure together the vehicle body and the vehicle suspension; and,

when the second pivot arm is in the unlocked position, the third compression spring exerts a bias on the third locking pin that overcomes the bias of the third extension spring on the third locking pin thereby biasing the third locking pin out of engagement with the vehicle body so that the vehicle body is slidable with respect to the vehicle suspension, and the fourth compression spring exerts a bias on the fourth locking pin that overcomes the bias of the fourth extension spring on the fourth locking pin thereby biasing the fourth locking pin out of

engagement with the vehicle body so that the vehicle body is slidable with respect to the vehicle suspension.

13. The slider assembly of claim 12 further including a crank arm being movable between a locked position and an unlocked position, and the crank arm being secured to the shaft so that upon movement of the crank arm to the locked position the shaft rotates to place the first pivot arm and the second pivot arm in the locked position, and upon movement of the crank arm to the unlocked position the shaft rotates to place the first pivot arm and the second pivot arm in the unlocked position.

14. The slider assembly of claim 11 wherein the first compression spring is movable between a relaxed position when the first pivot arm is in the locked position and a compressed position when the first pivot arm is in the unlocked position, and the second compression spring is movable between a relaxed position when the first pivot arm is in the locked position and a compressed position when the first pivot arm is in the unlocked position.

15. The slider assembly of claim 11 wherein the first extension spring exerts a direct bias on the first locking pin, and the second extension spring exerts a direct bias on the second locking pin.

16. The slider assembly of claim 11 wherein the first compression spring exerts a direct bias on the first locking pin, and the second compression spring exerts a direct bias on the second locking pin.

17. The slider assembly of claim 11 wherein the first extension spring and the first compression spring each exert a direct bias on the first locking pin, and the second extension spring and the second compression spring each exert a direct bias on the second locking pin.

18. A vehicle comprising:

a vehicle body;

a vehicle suspension;

a slider assembly, the slider assembly connecting the vehicle body and the vehicle suspension, the slider assembly being movable between a locked condition wherein the vehicle body and the vehicle suspension are secured together and an unlocked condition wherein the vehicle body and the vehicle suspension are slidingly adjustable with respect to each other;

the slider assembly comprising:

a frame assembly;

the frame assembly including a locking mechanism, the locking mechanism comprising:

a locking pin movable in and out of engagement with the vehicle body;

a first spring adjacent the locking pin;

a pivot arm movable between a locked position and an unlocked position;

a second spring connecting the pivot arm and the locking pin;

when the pivot arm is in the locked position the second spring does not exert a bias on the locking pin so that the first spring biases the locking pin into engagement with the vehicle body so as to secure together the vehicle body and the vehicle suspension; and,

when the pivot arm is in the unlocked position the second spring exerts a bias on the locking pin so as to overcome the bias of the first spring so as to bias the locking pin out of engagement with the vehicle body so that the vehicle body is slidable with respect to the vehicle suspension.

19. The vehicle of claim 18 wherein the vehicle body further includes a slide

rail containing a plurality of apertures, and when the slider assembly is in the locked condition the locking pin engaging a selected one of the apertures in the slide rail.

20. The vehicle of claim 18 wherein the first spring is an extension spring and the second spring is a compression spring and the bias of the fully compressed compression spring on the locking pin is greater than the bias of the extension spring on the locking pin.

21. The vehicle of claim 18 further including a crank arm being operatively connected to the pivot arm, and the crank arm being movable between a locked position in which the pivot arm is in the locked position and an unlocked position in which the pivot arm is in the unlocked position.

22. The vehicle of claim 21 further including a central shaft being connected to the pivot arm, and the crank arm being connected to the central shaft whereby the shaft and the pivot arm rotate upon movement of the crank arm.

23. The vehicle of claim 22 further including a pull rod connected to the crank arm, the pull rod being longitudinally movable between a locked position and an unlocked position.

24. The vehicle of claim 18 wherein the second spring is movable between a relaxed position when the pivot arm is in the locked position and a compressed position when the pivot arm is in the unlocked position.

25. The vehicle of claim 18 wherein the first spring exerts a direct bias on the locking pin.

26. The vehicle of claim 18 wherein the second spring exerts a direct bias on the locking pin.

27. The vehicle of claim 18 wherein the first spring and the second spring each exert a direct bias on the locking pin.

28. A slider assembly providing an operative connection between a vehicle body and a vehicle suspension, the slider assembly comprising:

a frame assembly operatively connecting the vehicle body and the vehicle suspension;

the frame assembly including a locking mechanism, the locking mechanism comprising:

a locking pin connected to a first means for exerting a first bias on the locking pin so as to bias the locking pin into a locked position;

a pivot arm movable between a locked position and an unlocked position;

a second means, connecting the pivot arm and the locking pin, for selectively exerting a second bias on the locking pin wherein the second bias acts to overcome the first bias and moves the locking pin to an unlocked position;

when the pivot arm is in the locked position the second means does not exert a bias on the locking pin so that the first means biases the locking pin into engagement with the vehicle body so as to secure together the vehicle body and the vehicle suspension; and,

when the pivot arm is in the unlocked position the second means exerts the second bias on the locking pin so as to overcome the first bias of the first means so as to move the locking pin out of engagement with the vehicle body so that the vehicle body is slidable with respect to the vehicle suspension.

29. The slider assembly of claim 28 wherein the second means comprises a compression spring being movable between a relaxed position when the pivot arm is in the locked position and a compressed position when the pivot arm is in the unlocked position.



30. The slider assembly of claim 29 wherein the first means comprises an extension spring that exerts a direct bias on the locking pin.

31. The slider assembly of claim 30 wherein the extension spring and the compression spring each exert a direct bias on the locking pin.